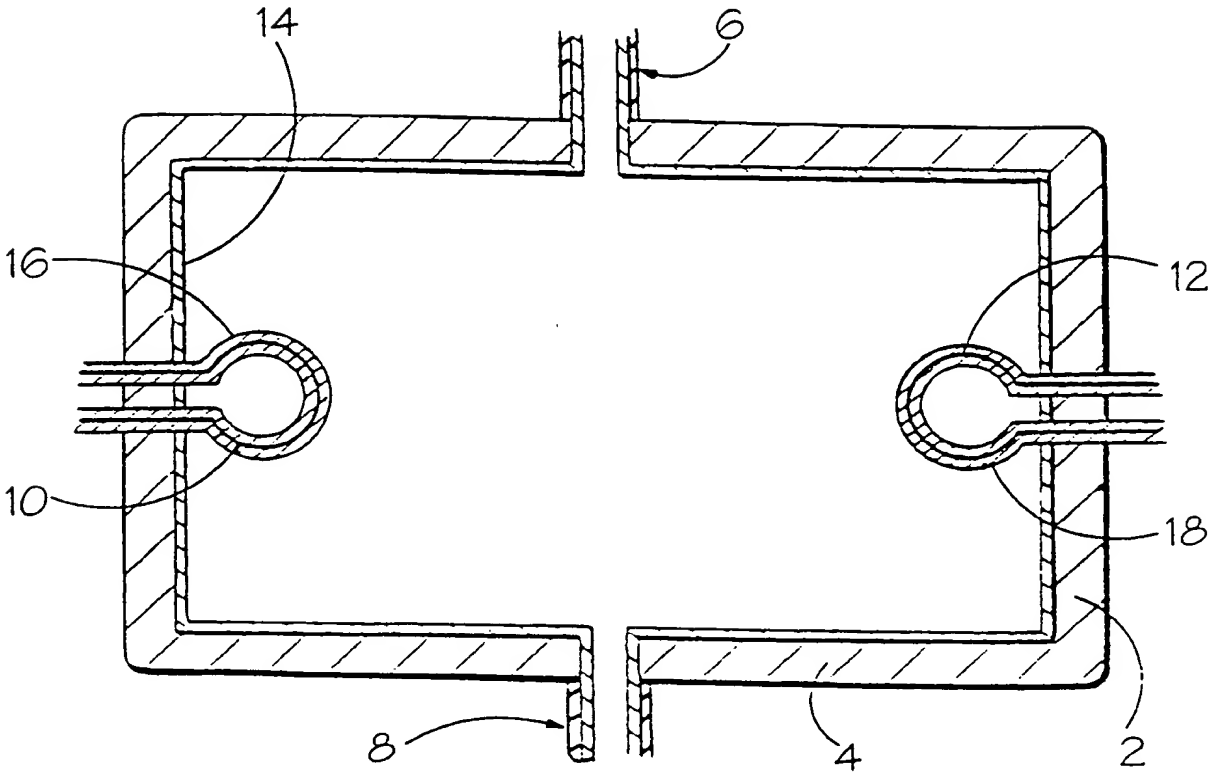


FIG.1.

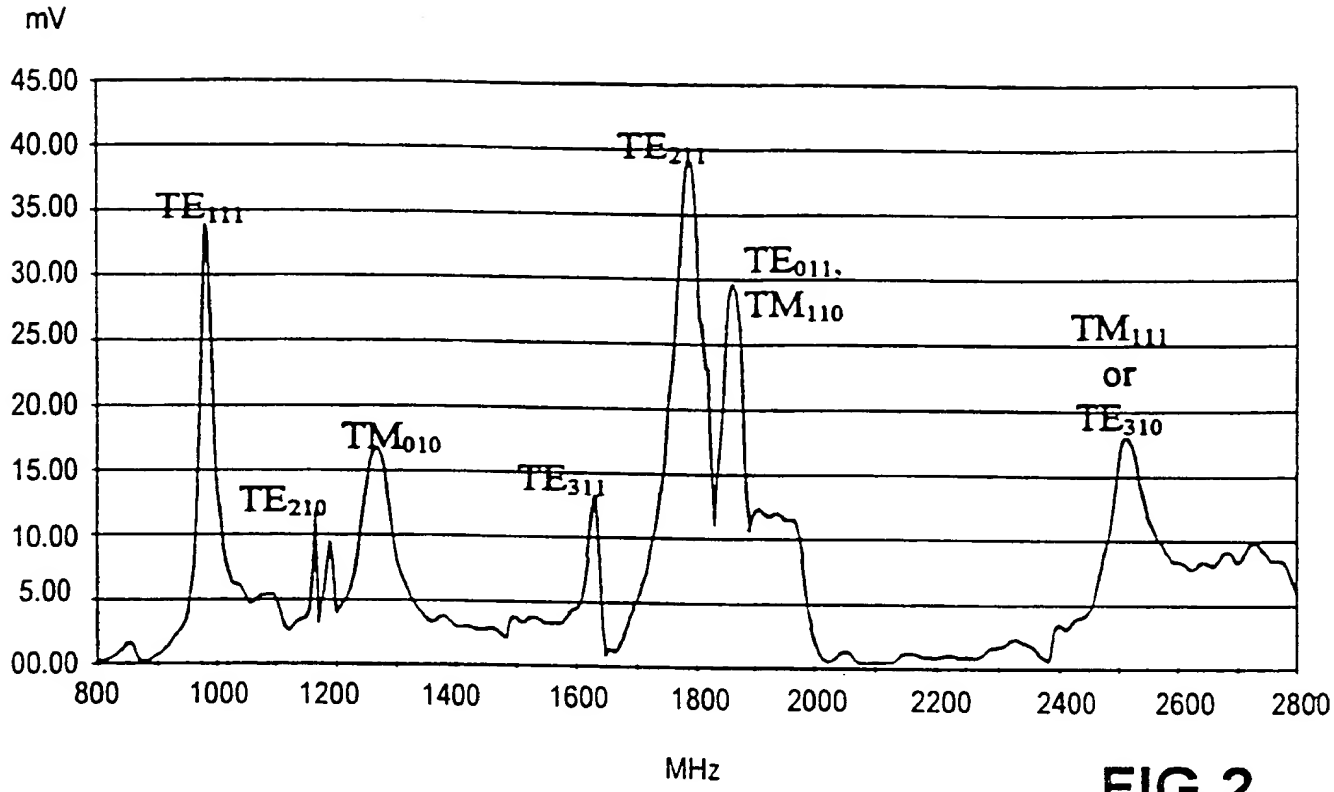
mV
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
00.00
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
2800
MHz
TE111
TE210
TM010
TE311
TE211
TE011,
TM110
TM111
or
TE310

FIG.2.

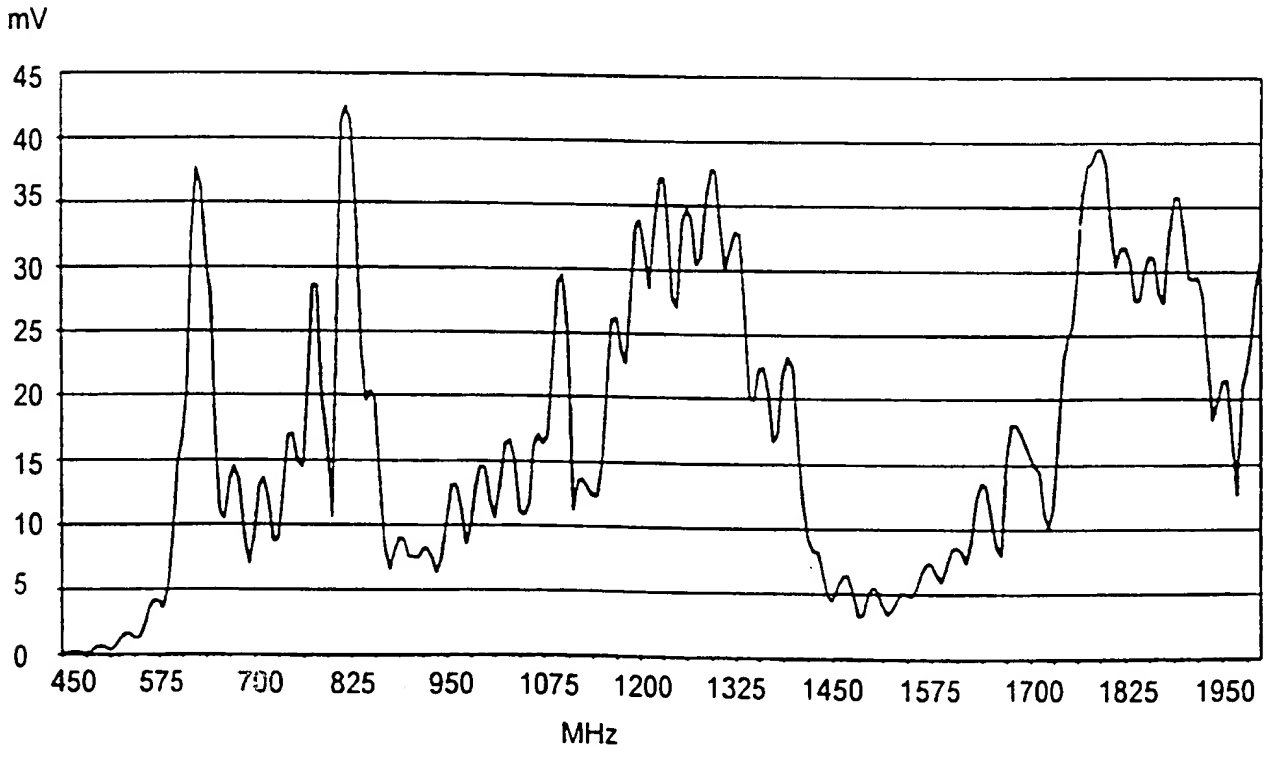
mV
45
40
35
30
25
20
15
10
5
0
450
575
700
825
950
1075
1200
1325
1450
1575
1700
1825
1950
MHz

FIG.3.

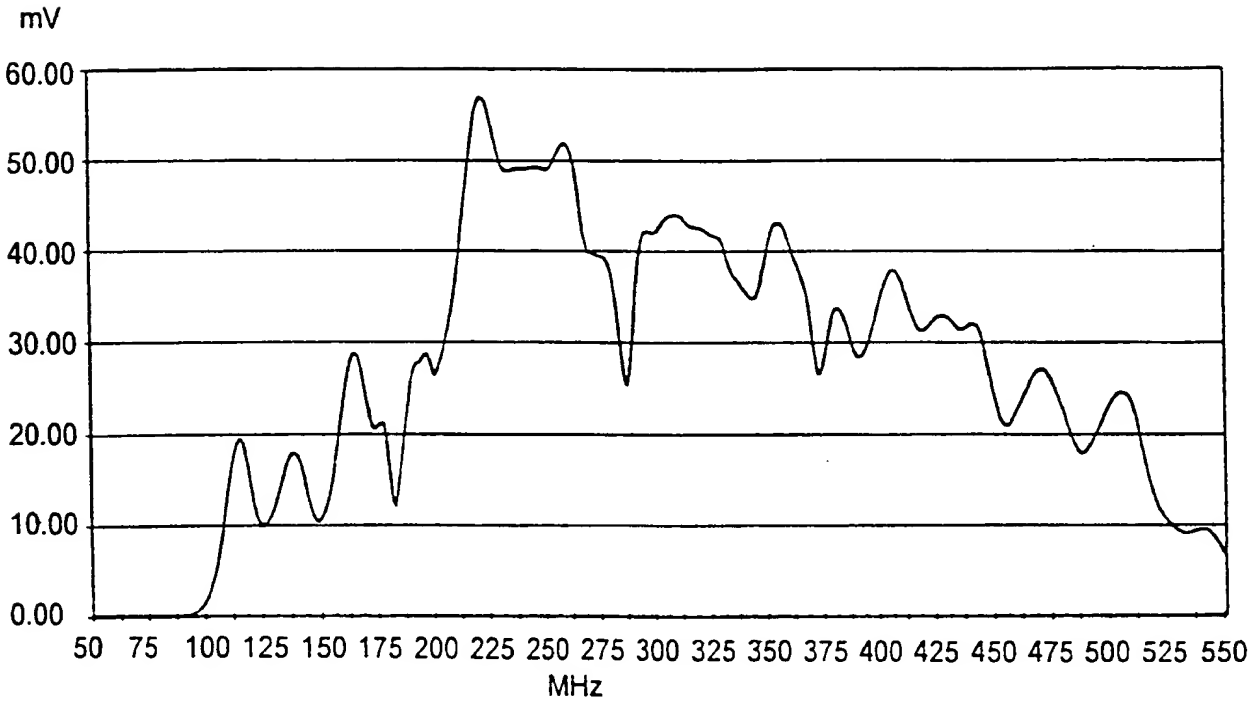
mV
60.00
50.00
40.00
30.00
20.00
10.00
0.00
50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550
MHz

FIG.4.

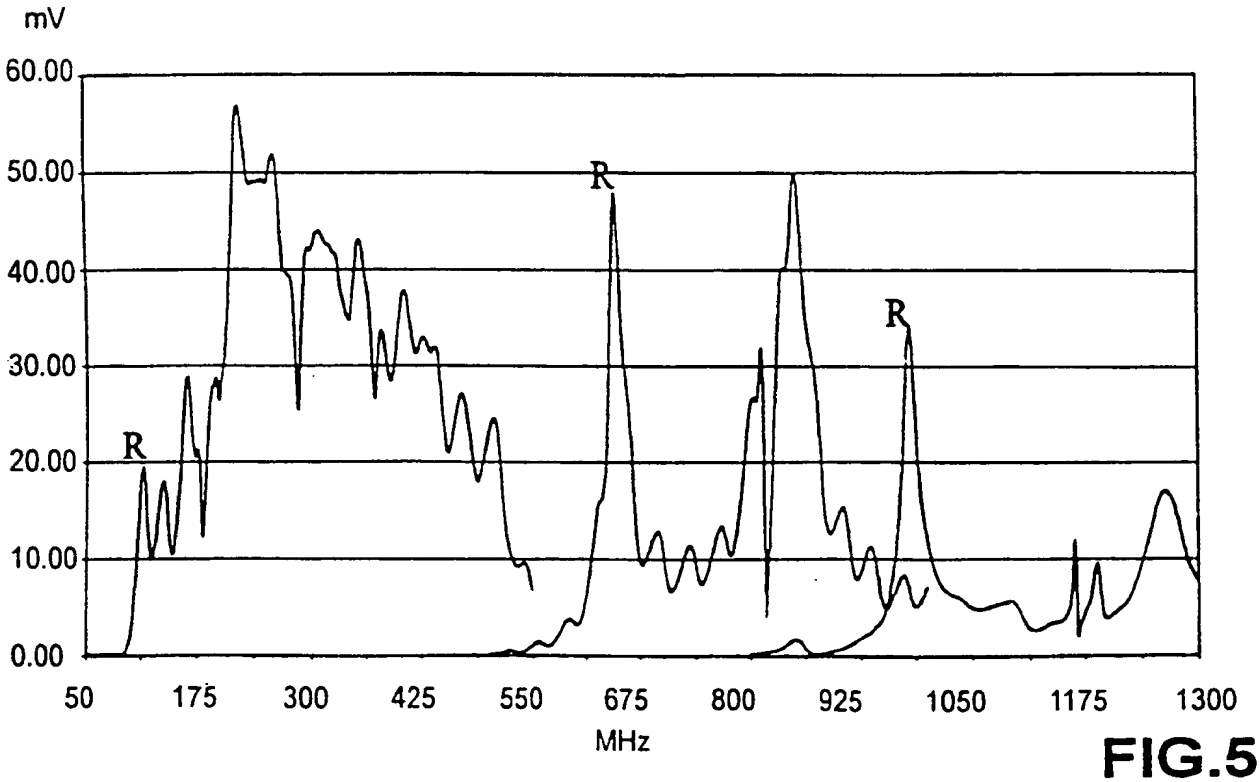
mV
60.00
50.00
40.00
30.00
20.00
10.00
0.00
R
R
R
50 175 300 425 550 675 800 925 1050 1175 1300
MHz

FIG.5.

| %Gas | %Oil | %Water | Freq (MHz) |
|---|---|---|---|
| 100 | 0 | 0 | 981 |
| 90 | 10 | 0 | 977 |
| 80 | 20 | 0 | 952 |
| 70 | 30 | 0 | 851 |
| 60 | 40 | 0 | 802 |
| 50 | 50 | 0 | 759 |
| 40 | 60 | 0 | 723 |
| 30 | 70 | 0 | 707 |
| 20 | 80 | 0 | 682 |
| 10 | 90 | 0 | 663 |
| 0 | 100 | 0 | 649 |
| 100 | 0 | 0 | 981 |
| 90 | 0 | 10 | 938 |
| 80 | 0 | 20 | 610 |
| 70 | 0 | 30 | 431 |
| 60 | 0 | 40 | 365 |
| 50 | 0 | 50 | 305 |
| 40 | 0 | 60 | 240 |
| 30 | 0 | 70 | 190 |
| 20 | 0 | 80 | 170 |
| 10 | 0 | 90 | 143 |
| 0 | 0 | 100 | 118 |
| 0 | 100 | 0 | 640 |
| 0 | 90 | 10 | 423 |
| 0 | 80 | 20 | 335 |
| 0 | 70 | 30 | 277 |
| 0 | 60 | 40 | 236 |
| 0 | 50 | 50 | 205 |
| 0 | 40 | 60 | 159 |
| 0 | 30 | 70 | 148 |
| 0 | 20 | 80 | 131 |
| 0 | 10 | 90 | 126 |
| 0 | 0 | 100 | 118 |
| 0 | 50 | 50 | 205 |
| 10 | 45 | 45 | 231 |
| 20 | 40 | 40 | 257 |
| 30 | 35 | 35 | 320 |
| 40 | 30 | 30 | 372 |
| 50 | 25 | 25 | 440 |
| 60 | 20 | 20 | 530 |
| 70 | 15 | 15 | 600 |
| 80 | 10 | 10 | 755 |
| 90 | 5 | 5 | 915 |
| 100 | 0 | 0 | 981 |

FIG.6.

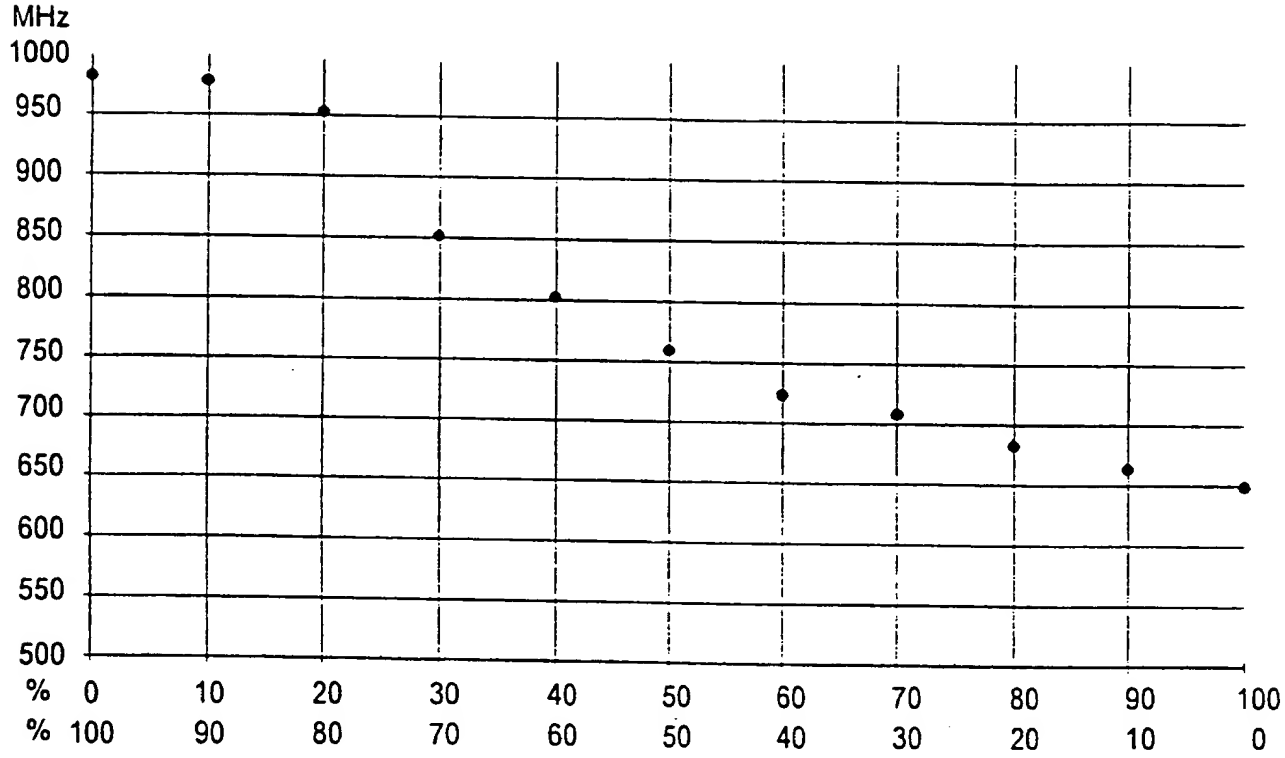
MHz
1000
950
900
850
800
750
700
650
600
550
500
% 0 10 20 30 40 50 60 70 80 90 100
% 100 90 80 70 60 50 40 30 20 10 0

FIG.7.

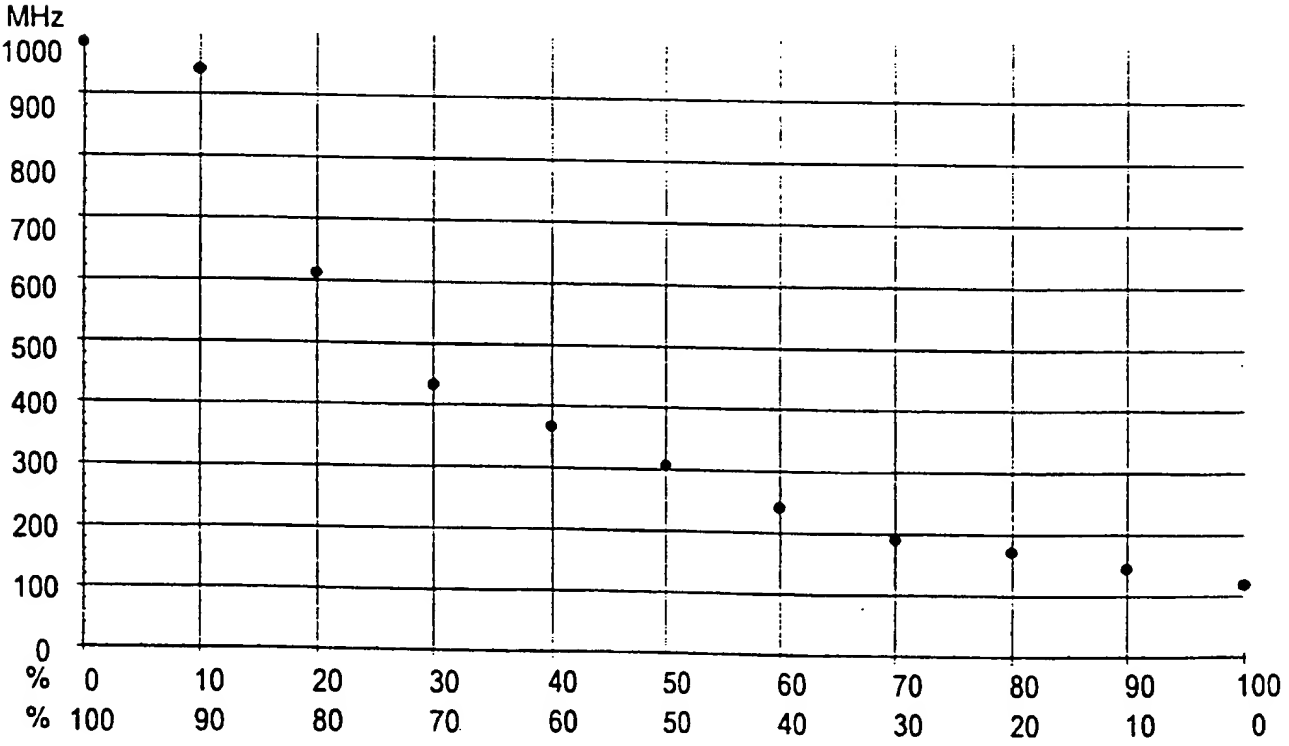
MHz
1000
900
800
700
600
500
400
300
200
100
0
% 0 10 20 30 40 50 60 70 80 90 100
% 100 90 80 70 60 50 40 30 20 10 0

FIG.8.

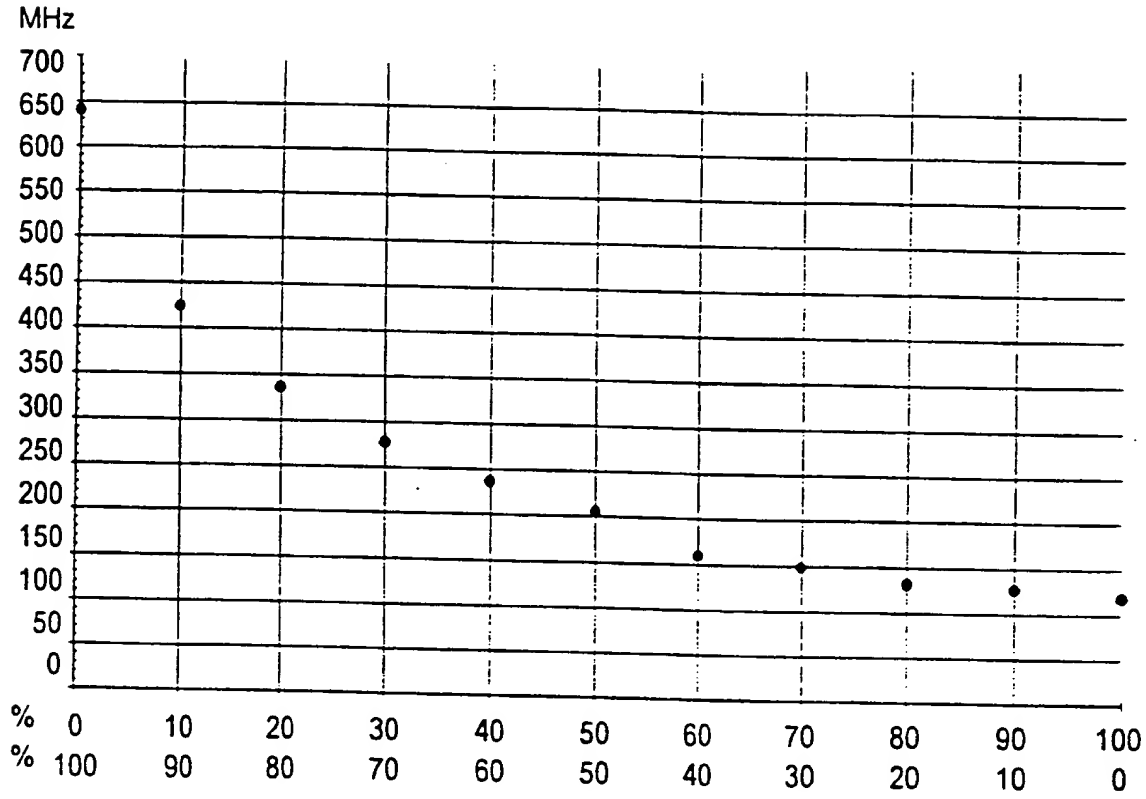
MHz
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
% 0 10 20 30 40 50 60 70 80 90 100
% 100 90 80 70 60 50 40 30 20 10 0

FIG.9.

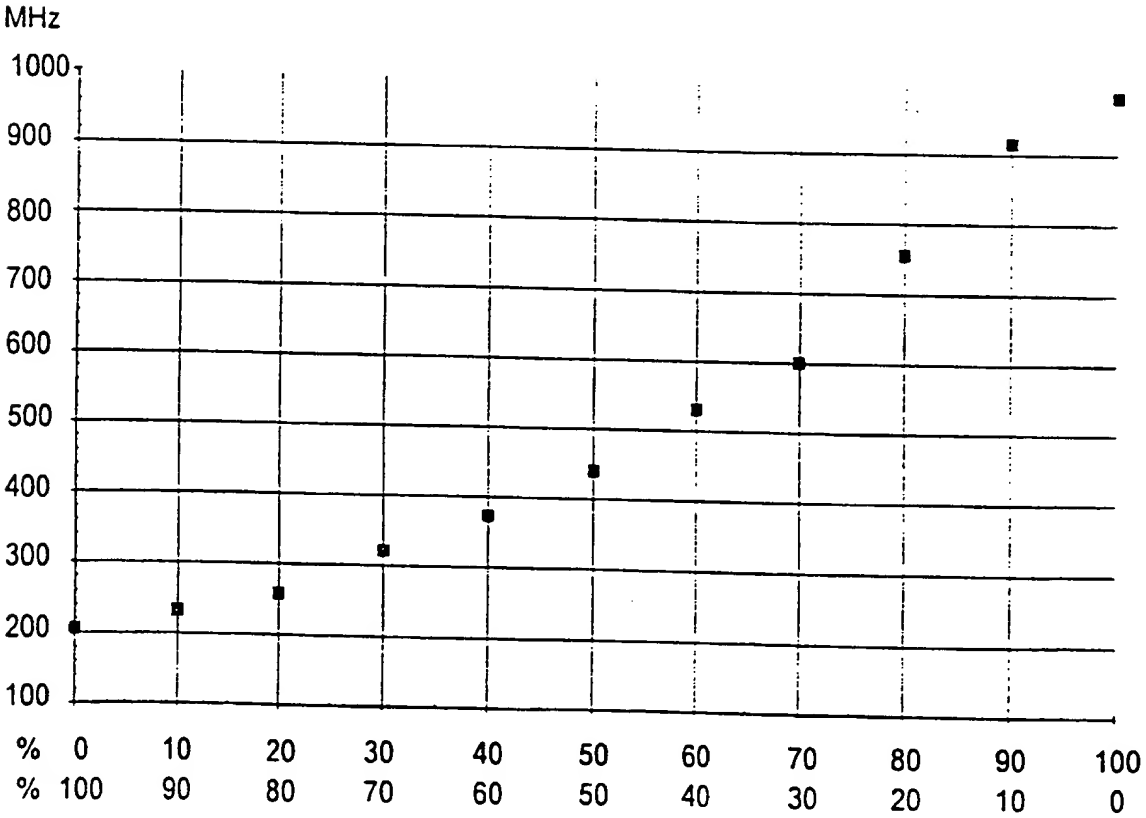
MHz
1000
900
800
700
600
500
400
300
200
100
% 0 10 20 30 40 50 60 70 80 90 100
% 100 90 80 70 60 50 40 30 20 10 0

FIG.10.

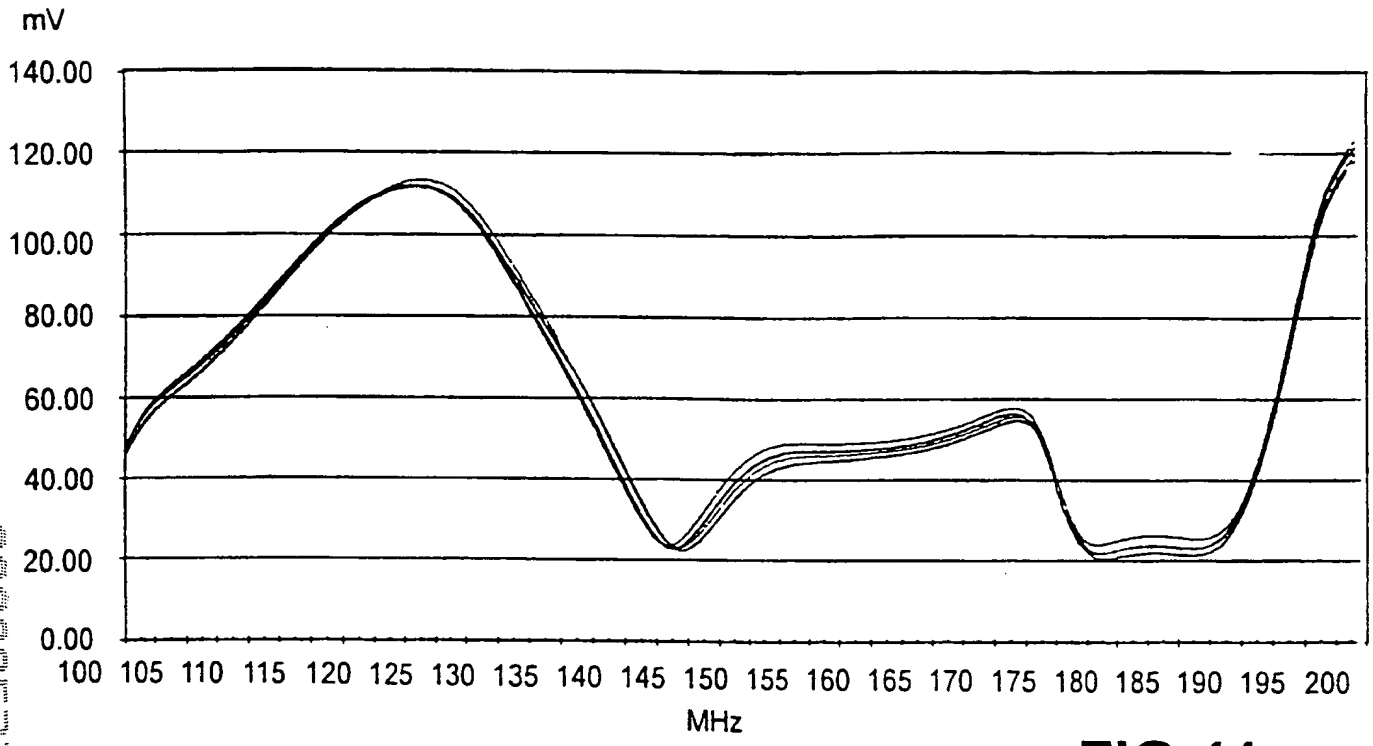
mV
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200
MHz

FIG.11.

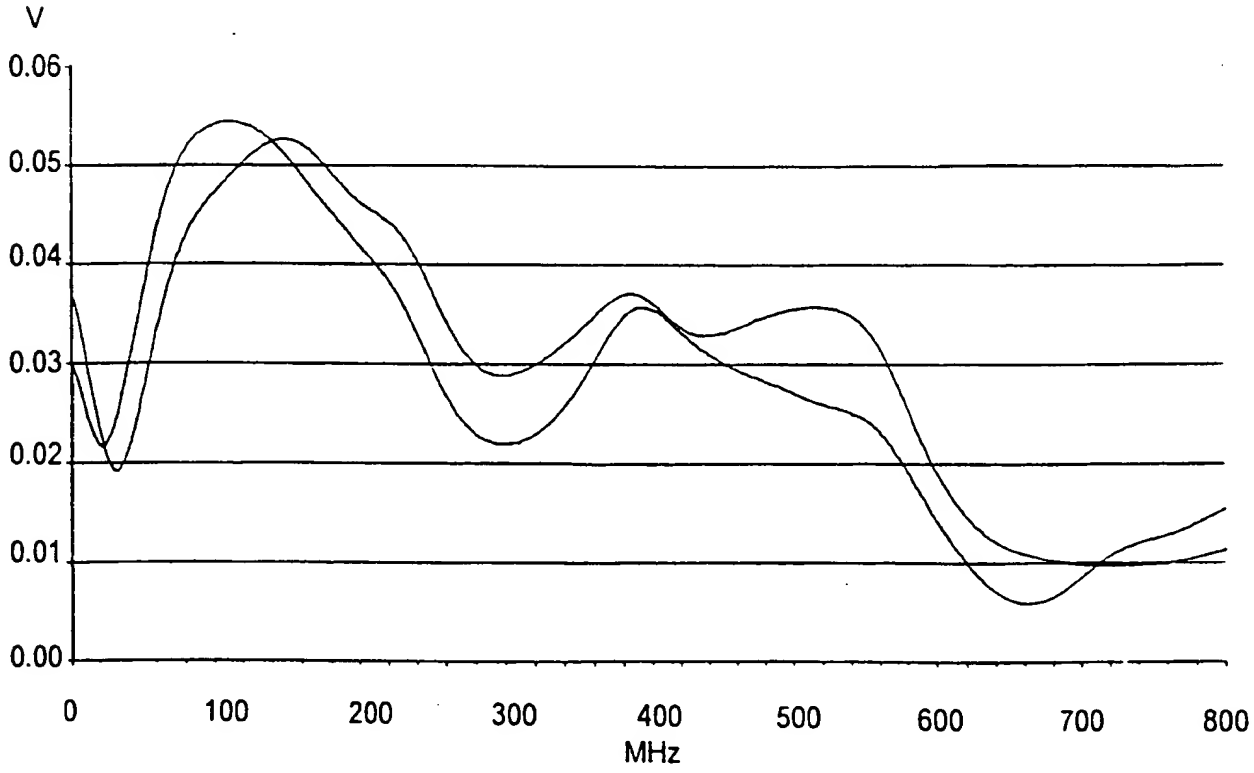
V
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0 100 200 300 400 500 600 700 800
MHz

FIG.12.

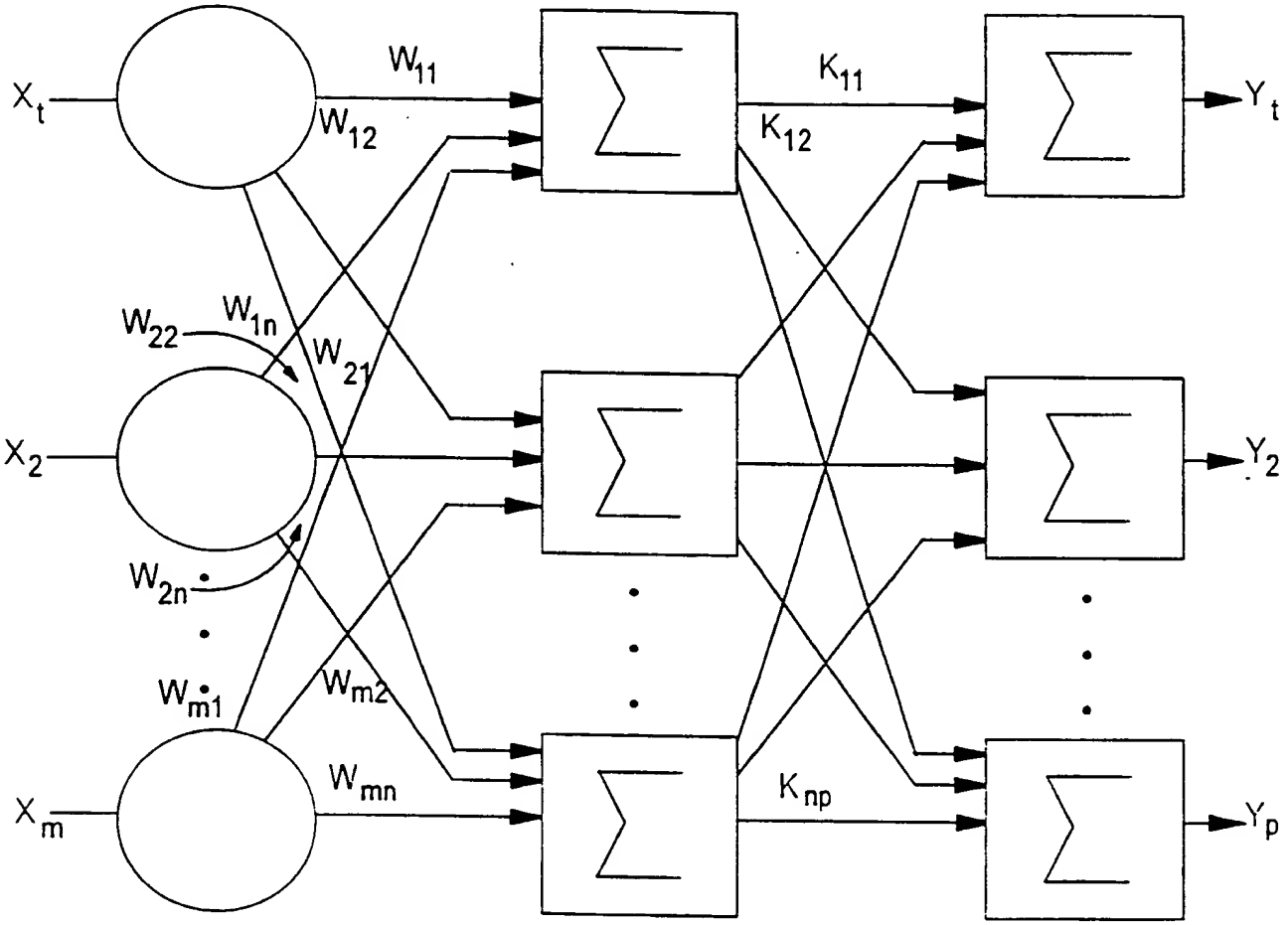
$X_t$
$X_2$
$X_m$
$W_{11}$
$W_{12}$
$W_{22}$
$W_{1n}$
$W_{21}$
$W_{2n}$
$W_{m1}$
$W_{m2}$
$W_{mn}$
$K_{11}$
$K_{12}$
$K_{np}$
$Y_t$
$Y_2$
$Y_p$

FIG.13.

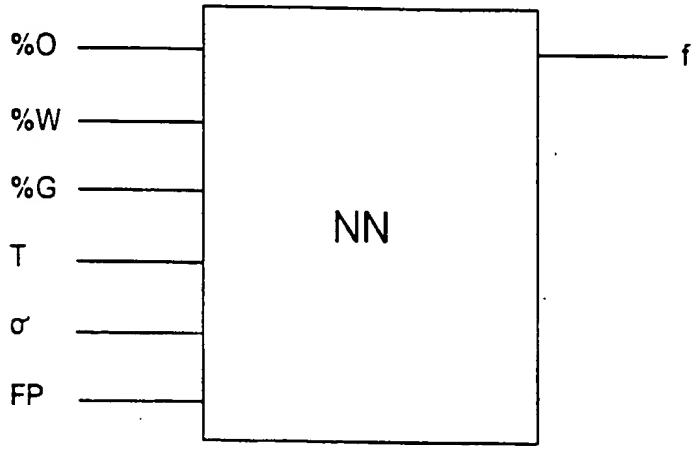
%O
%W
%G
T
σ
FP
NN
f

FIG.14.

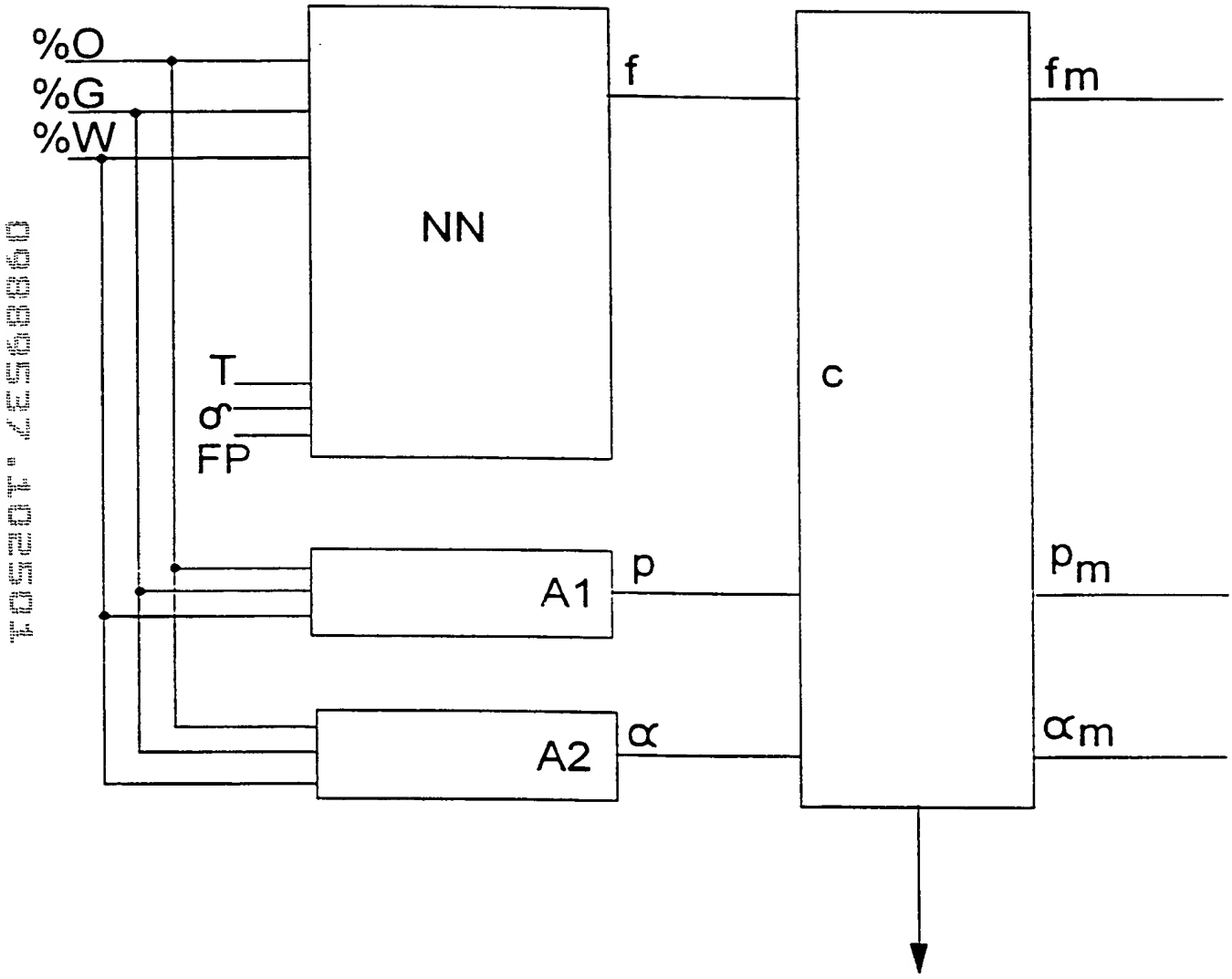


FIG.15.

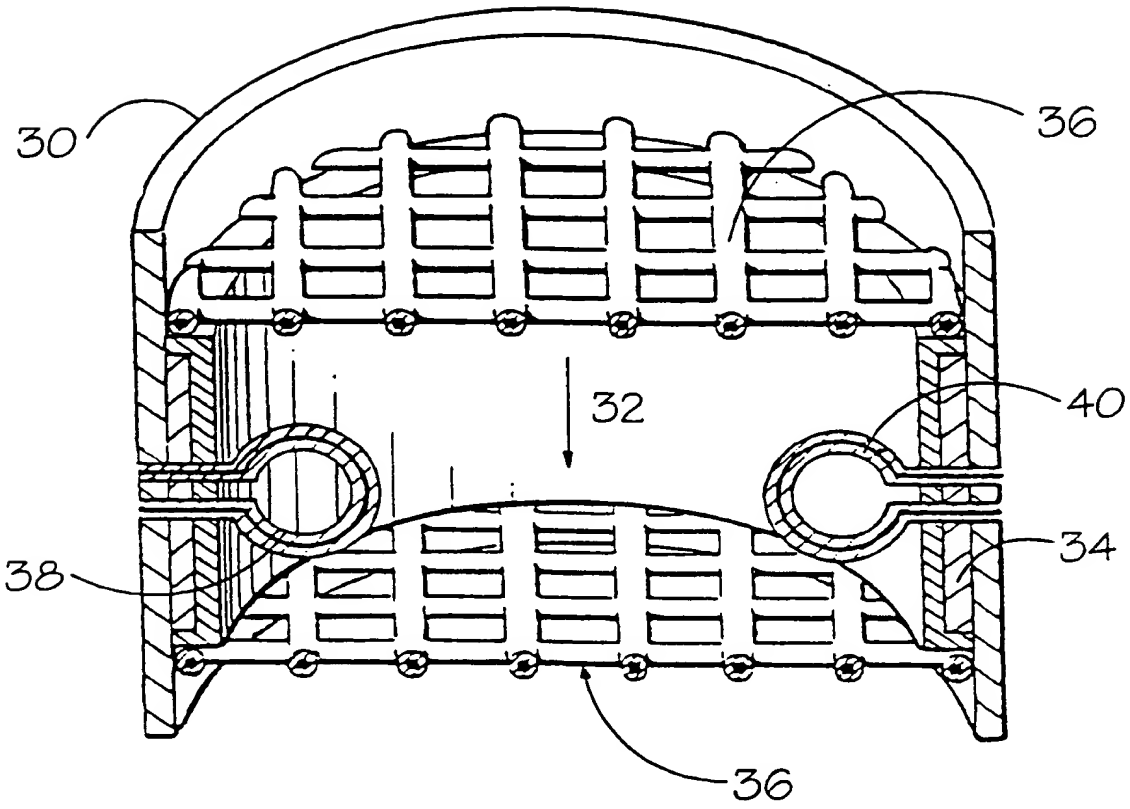


FIG.16.

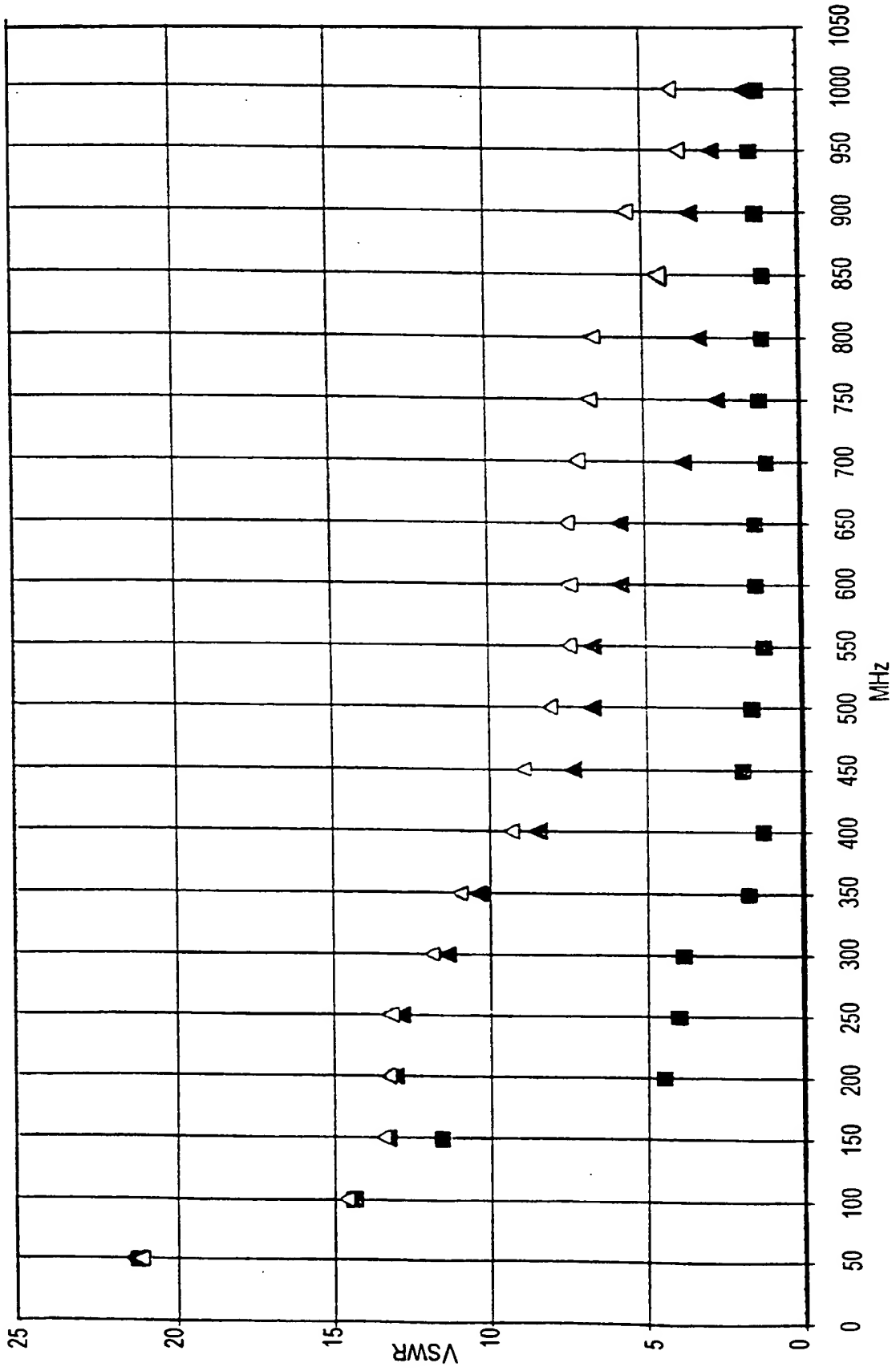
VSWR
25
20
15
10
5
0
MHz
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050

FIG.17.

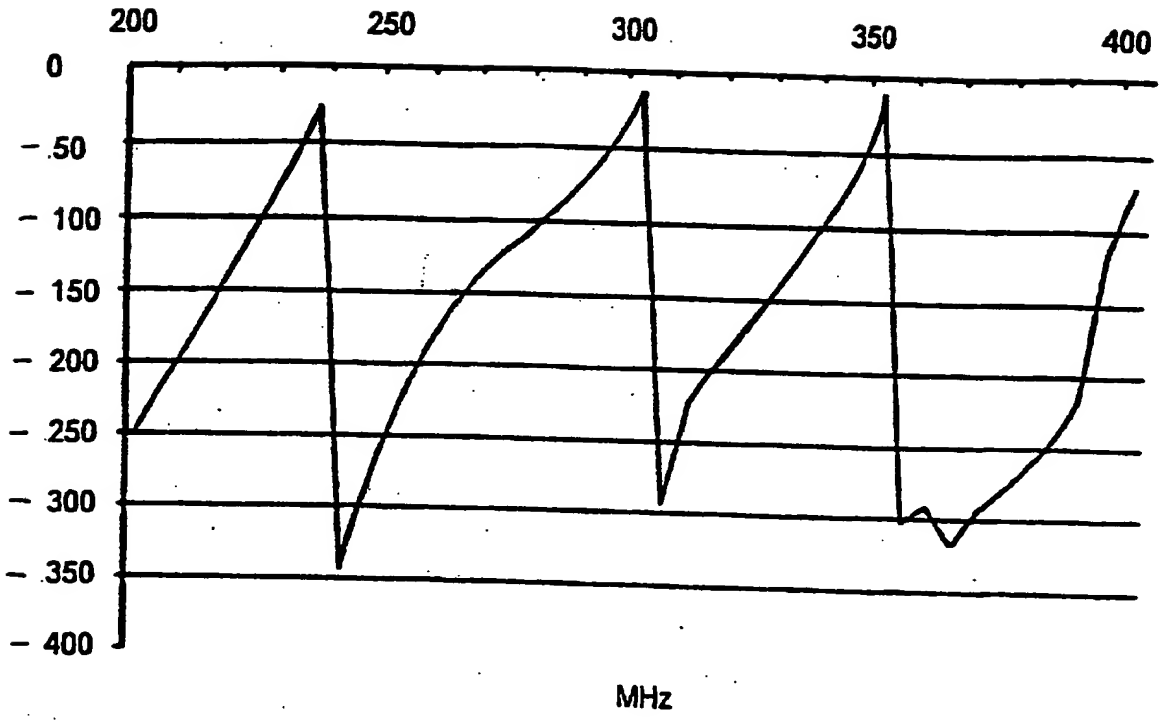


FIG.18.